

Applicants have fallen short in complying with the provisions of 37 CFR 1.98(d).

Reconsideration and allowance of claims 6 and 22, "rejected under 35 U.S.C. 112, first paragraph," are respectfully requested. The specification, at page 7, line 6, identifies "resin coated copper foils" as a material that may be used to form layer 256 and the specification, at page 6, line 30, indicates that layer 256 comprises "a dielectric material." According to the *McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS*, Fifth Edition, a "dielectric material" is defined as

"Also known as dielectric. 1. A material which is an electrical insulator or in which an electrical field can be sustained with a minimum dissipation of power. 2. In a more general sense, any material other than a condensed state of metal." (copies of the title page and page 563 enclosed).

Thus, a dielectric can include a "resin-coated copper foil" because a dielectric that includes a resin-coated copper foil (1) can sustain an electrical field with a minimum dissipation of power and (2) is not in its entirety a condensed state of metal. Applicants submit that claims 6 and 22 find support in the specification and these claims are clear. The rejection of these claims under Section 112, first paragraph, should be withdrawn.

Reconsideration and allowance of claims 1 through 8, 10, 12 through 15, 19 through 23, 37, 38, and 48, "rejected under 35 U.S.C. 112, second paragraph," are respectfully requested.

(1) Regarding claims 1 and 48, each call for

"a non-conductive layer comprising a dielectric material free of continuous glass fibers applied to said substrate"

If there are no glass fibers (i.e., the dielectric material is free of glass fibers), how can one read into claims 1 and 48 that the glass fibers, of which there are none, could be applied to the substrate, as the Examiner suggests is a possible reading of claims 1 and 48? Applicants submit that claims 1 and 48

are clear and that the rejection of these claims under Section 112, second paragraph, be withdrawn.

(2) Regarding claims 6 and 22, according to the *McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS*, Fifth Edition, a "dielectric material" is defined as

"Also known as dielectric. 1. A material which is an electrical insulator or in which an electrical field can be sustained with a minimum dissipation of power. 2. In a more general sense, any material other than a condensed state of metal. (copies of the title page and page 563 enclosed).

Thus, a dielectric can include "resin-coated copper foil" because a dielectric that includes a resin-coated copper foil (1) can sustain an electrical field with a minimum dissipation of power and (2) is not in its entirety a condensed state of metal. Applicants submit that claims 6 and 22 are clear and that the rejection of these claims under Section 112, second paragraph, should be withdrawn.

(3) Regarding claim 8, as shown in Figures 3, 4, 5, and 6, the power planes (i.e., one form of electrically conductive circuitry) are spaced from the plated through holes and the clearances between the two are filled with dielectric material. Applicants submit that claim 8 is clear and that the rejection of this claim under Section 112, second paragraph, should be withdrawn.

(4) Regarding claim 10, for the embodiment of the invention covered by this claim, the power plane is different from the electrically conductive circuit. This is evident by specifying that claim 10 is directed to the "electronic device package as recited in claim 48 further comprising at least one power plane" (emphasis added). With respect to the location or position of this power plane, by specifying that the electronic device package further comprises the power plane, it is evident that the power plane is in the electronic device package and no further definition of the specific location of this power plane is required. The important point, with respect to the embodiment of the invention to which claim 10 is directed, is that the electronic device package includes a power plane and not the specific

location or position of the power plane within the electronic device package. Applicants submit that claim 10 is clear and that the rejection of this claim under Section 112, second paragraph, should be withdrawn.

(5) Regarding claim 12, Applicants have drafted claim 12 to be limited to embodiments of the invention which include a plated through hole that extends through the substrate and the non-conductive layer and not be limited to an embodiment of the invention that has the plated through hole extending also through other elements, such as the power plane or the conductive circuitry as suggested by the Examiner. As drafted, claim 12 is a complete statement of an operative embodiment of the invention, without further recitations on the relationship of the plated through hole to other elements of the electronic device package. Surely, the Examiner is not suggesting that limitations added by dependent claims always are essential, so they should be included in the independent claim from which they depend. Applicants submit that claim 12 is clear and that the rejection of this claim under Section 112, second paragraph, should be withdrawn.

(6) Regarding the rejection of claim 13, Applicants' comments are essentially the same as offered above in connection with the rejection of claim 12. Applicants choose not to specify in any greater detail (i.e., add limitations) the relationship between the power plane and the plated through hole. As drafted, claim 13 is a complete statement of an operative embodiment of the invention, without further recitations on the relationship of the plated through hole to the power plane. In addition, the recitation "said power plane is spaced from said through hole" provides sufficient antecedent basis for "the space" (in line for of claim 13) "between said power plane and said through hole." When the entire claim is read, to what other space could "the space" be applicable? Applicants submit that claim 13 is clear and that the rejection of this claim under Section 112, second paragraph, should be withdrawn.

(7) Regarding claim 14, the question asked by the Examiner is answered, for example, in Figure 4 where non-conductive layer 256 is between plated through hole 224 and circuitry 218. Applicants submit that claim 14 is clear and that the rejection of this claim under Section 112, second paragraph, should be withdrawn.

(8) Regarding claim 15, this claim has been amended to specify "at least one clearance between said electrically conductive circuitry and said plated through hole" (emphasis added). Claim 15, as amended, is clear and the rejection of this claim under Section 112, second paragraph, should be withdrawn.

Applicants assume that claims 19 through 23 and 38, all dependent directly on claim 9, were wrongly included in the Section 112, second paragraph, rejection because the Examiner has not provided a basis for the rejection of claims 9, 19 through 23, and 38 and none of these claims is dependent on a claim for which the Examiner has provided a basis for the rejection.

With respect to the remaining claims in the Section 112, second paragraph, rejection, Applicants assume that those claims that have not been addressed specifically by the Examiner have been included in this rejection only because they are dependent on a claim that has been addressed specifically by the Examiner.

Reconsideration and allowance of claims 1 through 8 and 37, "rejected under 35 U.S.C. 103(a) as being unpatentable over Pellegrino (US Patent No. 4,521,262) in view of Day et al. (US Patent No. 5,026,624)," are respectfully requested. Applicants traverse this rejection on at least the following grounds:

(1) The Examiner has justified the combination of the Pellegrino and Day references because, according to the Examiner, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Pellegrino and Day in order to have the non-conductive layer be made of a dielectric material free of continuous glass fibers." In other words, if the non-conductive layer is to comprise a dielectric material free of continuous glass fibers, it would be obvious to have the non-conductive layer comprise a dielectric material free of continuous glass fibers. This is true, but it is the prior art, not Applicants' claims that must provide the teaching or suggestion or motivation for combining the Pellegrino and Day references. The Examiner has taken the position that if, according to Applicants' claims, the non-conductive layer, as one part of the combination recited by Applicants claims, is to comprise a

dielectric material free of continuous glass fibers, the inclusion of a non-conductive layer that comprises a dielectric material free of continuous glass fibers in Applicants' claims makes Applicants' claims obvious (i.e., Applicants' claims teach or suggest or motivate the combination), without regard to whether the prior art taken as a whole teaches or suggests or motivates the combination. This is clearly improper. Rather, the Examiner must find the teaching or the suggestion or the motivation for making the combination of references in the prior art and the Examiner has not done so in the Section 103 rejection of claims 1 through 8 and 37.

(2) It is not clear that "Day teaches an epoxy based dielectric material that is free of continuous glass fibers" as the Examiner contends. The Examiner is requested to specifically identify that part of the Day reference that teaches "a dielectric material free of continuous glass fibers" if the Day reference is used again in any rejection because of its teaching of "an epoxy based dielectric material that is free of continuous glass fibers."

In view of the arguments advanced above, claim 1 is patentable over the combination of the Pellegrino reference and the Day reference, as are claims 2 through 8 and 37 that are dependent on claim 1. In addition, if the rejection of claims 2 through 8 and 37, based on the combination of the Pellegrino reference and the Day reference, is repeated, the Examiner is requested to be more specific about how the prior art is being applied. For example, the Examiner is requested to cite (1) specific prior art that teaches or suggests the "use of a polyamide" or the use of "Kelvar-based paper impregnated with epoxy resin" in the combination defined by claims 4 and 5, and (2) the specific portion of the Pellegrino reference that discloses a dielectric material that is a "resin-coated copper foil" as specified in claim 6.

Reconsideration and allowance of claims 1 through 8 and 37, "rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffarth et al. (US Patent No. 4,868,350)," are respectfully requested. Applicants traverse this rejection on at least the following ground. The Examiner contends that the Hoffarth et al. reference discloses "a non-conductive layer (Reference number 11 a-d) comprising a dielectric material free of continuous glass fibers applied to said substrate layer" but does not specifically identify the dielectric material that is applied to the substrate layer and where, in the

Hoffarth et al. reference, this dielectric material is described as being free of continuous glass fibers.

In the absence of a specific teaching or suggestion in the Hoffarth et al. reference of the dielectric material of the non-conductive layer that is applied to the substrate being free of continuous glass fibers, claim 1 is patentable over the Hoffarth et al. reference, as are claims 2 through 8 and 37 that are dependent on claim 1. In addition, if the rejection of claims 2 through 8 and 37, based on the Hoffarth et al. reference, is repeated, the Examiner is requested to be more specific about how the prior art is being applied. For example, the Examiner is requested to cite (1) specific prior art that teaches or suggests the "use of a polyamide" or the use of "Kelvar-based paper impregnated with epoxy resin" in the combination defined by claims 4 and 5, and (2) the specific portion of the Hoffarth et al. reference that discloses a dielectric material that is a "resin-coated copper foil" as specified in claim 6.

Reconsideration and allowance of claims 10, 12, 13, 14, 15, 19, 20, 21, 22, 23, 38 and 48, "rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffarth et al. (US Patent No. 4,868,350)," are respectfully requested. Applicants traverse this rejection on at least the following grounds:

(1) The Examiner contends that the Hoffarth et al. reference, with regard to claim 48, discloses "a non-conductive layer (Reference number 11 a-d) free of continuous glass fibers comprising a dielectric material applied to said substrate layer" but does not specifically identify the dielectric material that is applied to the substrate layer and where, in the Hoffarth et al. reference, this dielectric material is described as being free of continuous glass fibers.

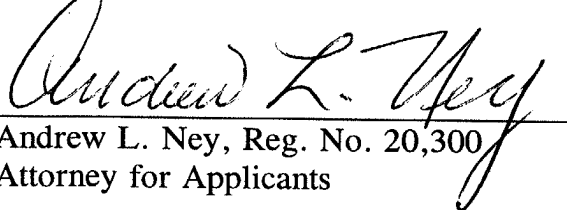
(2) The Examiner contends that the Hoffarth et al. reference, with regard to claim 13, discloses "a non-conductive layer comprising a dielectric material free of continuous glass fibers in the space between said power plane and said through hole" but does not specifically identify the dielectric material in the space between the power plane and the through hole and where, in the Hoffarth et al. reference, this dielectric material is described as being free of continuous glass fibers.

In the absence of a specific teaching or suggestion in the Hoffarth et al. reference of the dielectric material of the non-conductive layer that is applied to the substrate being free of continuous glass fibers, claim 48 is patentable over the Hoffarth et al. reference, as are claims 10, 12, 13, 14, 15, 19, 20, 21, 22, 23, and 38 that are dependent on claim 48. In addition, if the rejection of claims 10, 12, 13, 14, 15, 19, 20, 21, 22, 23, and 38, based on the Hoffarth et al. reference, is repeated, the Examiner is requested to be more specific about how the prior art is being applied. For example, the Examiner is requested to cite (1) specific prior art that teaches or suggests the "use of a polyamide" or the use of "Kelvar-based paper impregnated with epoxy resin" in the combination defined by claims 21 and 21, and (2) the specific portion of the Hoffarth et al. reference that discloses a dielectric material that is a "resin-coated copper foil" as specified in claim 22.

In view of the forgoing remarks, this application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

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August 23, 2002  
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